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Best Local :
                    1063
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                                                                                                                                                                                                                                                                                                                                                                                                                           763
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 1915 BP; 365 A; 610 C; 641 G; 299 T; 0 other;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  391 GGAATGAACTTGATCTTTGTTGCTGCTGAGGTGGCTCCGTGGAGTAAAACTGGAGGGCCTT 450
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GACCCCAGCAGGGACAAGTACATCGCCGTGAAGTACGACGTGTCGACGGCCGTGGAGGCC
                                   AATCCCTCAACAGACAAATACATAACAGCAAATTACGACGCAACCACTGTAATGGAGGCA 1287
                                                                                                                       AATATACTGCGCTTGAAAACCATCTGTGGCATCATAAATGGAATGGACACCAACGAGTGG
                                                                                                                                                                                       GTGAGCCCATACTATGCCCAGGAACTCGTCTCAGGAATCGATAAGGGCGTCGAGTTGGAC
                                                                                                                                                                                                                                                                                   AAAGGAAGGAAAATCAACTGGATGAAGGCGGGAATTATAGAATCAGATCGTGCATTGACT 1107
                                                                                 AACATCATGCGCCTCACCGGCATCACCGGCATCGTCAACGGCATGGACGTCAGCGAGTGG
                                                                                                                                                              GTCAGCCCCTACTACGCCGAGGAGCTCATCTCCGGCATCGCCAGGGGGCTGCGAGCTCGAC
                                                                                                                                                                                                                                              GAAGGCCGGAAGATCAACTGGATGAAGGCCGGGATCCTCGAGGCCGACAGGGTCCTCACC
                                                                                                                                                                                                                                                                                                                           AACCTCCCGGAGAGATTCAAGTCGTCCTTCGATTTCATCGACGGCTACGAGAAGCCCCGTG
                                                                                                                                                                                                                                                                                                                                                        AATCTCCCTGATACATTCAAGTCTTCTTTGATTTCATCGATGGCTATGCAAAACCAATA 1047
                                                                                                                                                                                                                                                                                                                                                                                                         TTCTGCATCCACAACATCTCCTACCAGGGCCGGTTCGCCTTCTCCGACTACCCGGAGCTG 822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGTTTGGCAACTCTGGAAACTCCAAGGGTTCTGAATCCCAACAATAACAAATATCATTCT
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                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCTGCATTCATAATATTGCGTATCAGGGACGGTTTGCCTTTGAAGATTTTTCGCGTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGCTACCTCAAGAGCA---ACTACCAGTCCCACGGCATCTACAGGGACGCAAAGACCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGCTATTTAAAGACCATTGTATATCAAGCCCATGGAATATACAAAAATGCTAAAGTTGCT 927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGACCATACGGGAGGGACGTCGTGTTCGTCTGCAACGACTGGCACACCGGCCCTCTCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGACCAAAAG----GTGAAGATTTATTCATTGCTAACGATTGGCATACTGCTCTATTACCT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GECGACGTCCTCGGCGGCCTGCCGCCGGCCATGGCCGCGAACGGGCACCGTGTCATGGTC 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGTGATGTTCTTGGAGGTTTGCCACCGGCCATGGCGGCAAAGGGACACAGGGTGATGACT 510
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66.9%;
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Pred. No. 4.8e-144;
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AAV28687 standard; cDNA;
     25-APR-1997;
10-SEP-1996;
                                              08-SEP-1997;
                                                                                                                                   Musa acuminata
                                                                                                                                                           Banana; ripening; pulp; Musa acuminata genetic control; tissue senescence; ss.
                                                                                                                                                                                                    Ripening banana pulp cDNA clone U-D112 SEQ
                                                                                                        WO9811228-A2
                                                                                                                                                                                                                                                                 AAV28687;
                                                                            19-MAR-1998
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97GB-0008366.
96GB-0018862.
                                            97WO-GB02424
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1806 GCCTGCTTTCGAGGAGATGATACAGAACTGCATGGCTCAAGATTTCTCCTGGAAGGGGCC 1865
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Modulation of ripening or tissue senescence in bananas - comprises use of DNA isolated from ripening banana pulp to produce genetically
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1998-207389/18
                                                                                     317 TAAAGATGATGTACAAAAAGTCATTCAGACAGTGAAAAGGGCCCCTTAAAGTTTACGGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               616
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                                                                                                                                        CGAGGCCGACGTGCTAAAGATTGTGGAAGCAGTGAAGAGAGCCCCTTATGGTTTATGGAAC 1805
                                                                                                                                                                                              CATAGAAGGCATCACAGGGTTTCATATGGGTCCCTTCAATCCTGATTGTGATGTTGTCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                               GGTGCTGATATCCTTGTTATTCCCAGTAGGTTCGAACCATGCGGTCTCATTCAGC-TCCA 1625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCAGACAAATTCAGAGCTCATATGAAGTTCAATATTCCTTTGGCTCATGGAATCATGGCG 1566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGCCCGTCAACAGTAAAATCCCTGTGATAGCTTTCATTGGCAGACTAGAAGAACAAAAG 1386
                                                                                                                                                                                                                                                                                                         GGGCATGCGATATGGAATTCCCCCCCATGTGCGCAACAACTGGTGGACTTGCTGACACTGT
                                                                                                                                                                                                                                                                                                                                                            GGGCATGAGATACGGAACCCCTTCCATGTGCACCACGACTGGTGGGCCTCGTCGACACTGT 1685
                                                                                                                                                                                                                                                                                                                                                                                                                  GGAGCAGATCTTCTTGNTCTTACCAGCAGATTCGAACCTTGTGGCCTTATCCAGCTTTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTTCTCGGTACTGGTAAAAAGAAGTTAGAGCGCCAACTTGCATTGCTCGAGGACGAGTTC 1506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGTTCAGACATTCTAGCTGAAGCAATTCCAAAGTTCTTCGATCAGGATGTTCAAGTGATA 1446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTAACCTGTTGACNGGAAATCCCTGTTATANCCTTTATAGGGAGATTAG-AGAGCAGAAA 677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCAACAAATGGGNNGGGTGCAAACCTTTGGATTAAGGGAANCCTAACAAGTTGAATTTGG 736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCAATAAAGTGAGAGCACATATGAAGTTTAATGCACCTTTGGNTCATGAAATCATGGCT 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTGCTTGGTANTGG-GAGAAGNTGTTGGAGCGTCAGCTTGCACAACTTGAAGATATGTTT 558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGTTCGGATATTTCGCNGCAGTTATTCCTGAATTCATTGATGAAAATGTTCAAGTGATA 617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   509;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of (1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Medina-Suarez
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RDJ, Seymour
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ç;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 359; DB 19;
Pred. No. 2.2e-67;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      148 G; 238 T; 13 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 813;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
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44

134 CCATGCCTTCTGTGACTGCATCACCATTCATTGCTAAAACCCCCATGCTCCAGCTACAATG 193

CAATGGCTGCTGTAACAAAGTCACAATTCATCTCGAAAGGCTCATGCGCTGGCTATGGGG 103

Matches Query Match

Similarity

14.5%;

Score 320; Pred. No. 4.

DB 19; 1.9e-59;

Length 790; Indels

14;

Gaps

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Conservative

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Mismatches

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RESULT 8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                        selecting from the transformed regenerants, plants with modulated ripening or tissue senescence characteristics. Also described in the present invention are: (1) plants, their progeny, seed and material obtained from the plants, produced by the above method; (2) a vector functional in plants comprising a promoter region which is operably in plant cells, a polynucleotide sequence as defined above, and a transcription termination sequence; and (3) a method of controlling plant pathogens comprising the application of anti-pathogenic agent to
                                                                                                                                                                                                                                                                                                      The present sequence represents a cDNA clone isolated from ripening banana pulp. 57 clones were isolated and are given in AAV28643 to AAV28699. The cDNA clone sequences can be used in a method of modulating
Sequence 790
                                             plants of (1).
                                                                                                                                                                                                                                       ripening or tissue senescence process in plants of the genus Musa. The method comprises: (a) inserting into the plant material at least 1 of the 57 sequences (as above); (b) regenerating the plant material, and (c)
                                                                                                                                                                                                                                                                                                                                                                                               Claim 1; Page 46; 72pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Modulation of ripening or tissue senescence in bananas - comprises
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1998-207389/18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bird CR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Musa acuminata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       genetic control;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Banana;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ripening banana pulp cDNA clone U-D111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAV28686;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAV28686 standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                          modified fruit
                                                                                                                                                                                                                                                                                                                                                                                                                                                              use of DNA isolated from ripening banana pulp to produce genetically
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (ZENE ) ZENECA LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25-APR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               08-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19-MAR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29-JUL-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGATGCTGATGAAATAGCTCCTCTTGCAAAGGAAAATGTGGCCACTCCCTGAAAGTGA 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCAAAGGAATGGGAGAAGTTCTTGCTGAGCCTTGGGCTCGAGGGTAGTGAAGCTGGAAT 1925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGAAGGCGAGGAAGTAGCTCCTCTCGCCAAGGAAAACGTGGCCACTCCATGAAACTGA 1983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCTGCATTTGCTGAGATGATACAGAACTGCATGACTCCAAGACCTCTCCTGGAAGGGACC 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGCTAAGAAGTGGGAGCAATTTNTCCTAAGCTTAGGAGCTGCTGGTAGTGAAGCCGGCAT 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ripening; pulp; Musa acuminata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Medina-Suarez RDJ,
  BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           97GB-0008366.
96GB-0018862.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            97WO-GB02424
  220 A; 153 C; 204 G; 201 T; 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tissue senescence;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     790
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Seymour GB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cv. Grand Nain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO:44
  other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           fruit;
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